BIBLIOGRAPHICAL RECORD.

Anthors and societies are requested to forward their works to the editors as soon as published. The date of publication, given in brackets [], marks the time at which the work was received, unless an earlier date of publication is known to recorder or editor. Unless otherwise stated each record is made directly from the work that is noticed.

Corrections of errors and notices of omissions are solicited.

Edwards, H: | Prospectus of "Papilio. Organ of the New York entomological club."] (Papilio, 15 [20] Jan. 1881, no. 1. v. 1. p. 1.)

This journal will be devoted solely to lepidoptera, and will be issued about the fifteenth of each month (except Julyand August); subscription price two dollars per annum.

8: P. M. (2169)

Grote, A: Radcliffe. A new insect injurious to the hickory. (Papilio, 19 Feb. 1881, no. 2, v. 1, p. 13-14.)

Describes aerobasis caryoe n. sp., larva, imago and chrysals (Ohio) and a. demotella (N. Y.); compares a. caryoe with a. angusella. States that it is necessary to have both sexes of this genns for identification. A. caryoe said to be very destructive to hickory trees (caryo porcina); phanerotoma tibialis parasitic on it.

Hi E. (2170)

Grote, A: Radcliffe. New pyralidae. (Papilio, 19 Feb. 1881, no. 2, v. 1, p. 15-19.)

Describes as new: cataclysta medicinalis (III.), hydrocampa pacalis (N.Y.), paraponyx plenilinealis (Wisc.), oligostigma obscuralis (Wisc.), toripalpus trabalis (Col.), nephopteryx scintillans (Cal.). Gives list of species of cataclysta, and notices some species of hydrocampa.

H: E. (2171)

Grote, A: Radcliffe. The North American species of *eustrotia*. (Papilio, 15 [20] Jan. 1881, no. 1, v. 1, p. 10.)

Gives list of the N. A. species; defends the name eustrotia in preference to erastria; compares eustrotia with thalpochares; describes eustrotia aeria n. sp. (Wisc.).

H: E. (2172)

Grote, A: Radcliffe. "North American tortricidae." By Lord Walsingham, London, 1879. (Papilio, 15 [20] Jan. 1881, no. 1, v. 1, p. 8-9.)

Review of T: de Grey's (Lord Walsingham) "Illustrations of typical specimens of lepidoptera heterocera..." [Rec., 1942].

H: E. (2173)

Lintner, Joseph Albert. On the importance of entomological studies. [Papilio, 15 [20] Jan. 1881, no. 1, v. 1, p. 1-2.)

Extracts from an address recently made to the Farmers' Club of Onondaga Co., N. Y. Aliudes to the introduction of destructive species.

H. E. (2174)

Müller, Hermann. Alpenblumen, ihre Befruchtung durch Insekten und ihre Anpassungen an dieselben. Mit 173 Abbildungen in Holzschnitt. Leipzig, Wilh. Engelmann, 1881. 612 p., 23×15.

Considers the mode of fertilization of 422 phaenogamous species, enumerating the insects taken upon each and their behavior. Discusses the structural peculiarities through which certain flowers profit by the visits of certain groups of insects, and the structures of the latter which are correlated with their floral activity. Gives tables showing the relative frequency of the different groups of insects about flowers in alpine and less elevated regions, and a classified list of all insects observed on the former, indicating the species which they visit, and the degree of adaptation found in these flowers.

W: T. (2175)

Neumoegen, Berthold. A new species of arctia, from Colorado. (Papilio, 19 Feb. 1881, no. 2, y. 1, p. 28-29.)

Describes arctia determinata from southern Colorado, H: E. (2176)

Neumoegen, Berthold. On a new species of *arctia* from Florida. (Papilio, 15 [20] Jan. 1881, no. 1, v. 1, p. 9-10.)

Describes arctia flammea, from Indian River, Fla.

H: E. (2177)

Neumoegen, Berthold. The illustration of edwardsia brillians. (Papilio, no. 1, v. 1, p. 12. pl. 1.)

Colored figure of this zygaenid moth, first described in Can. entom , Apr. 1880, v. 12, p. 67-69.

H: E. (2178)

Scudder, S: Hubbard. Catalogue of scientific serials of all countries, including transactions of learned societies in the natural, physical and mathematical sciences, 1633-1876. (Library of Harvard university, special publications, I.) Cambridge, [pub. by the Library], 1879. 12+158 p., 25×16, cl., \$4; printed on one side of leaf, \$5.

Notice. (Title-slip registry, Oct. [Nov.] 1879, v. 1, no. 10, p. 90.)

Countries geographically arranged, towns alphabetically under countries, societies and independent publications alphabetically under towns, transactions under societies. Contains ample cross-references, indexes of towns, of titles, and of minor topics. Numeros nearly 4500, entries about 6000; about 137 entomological titles.

B: P. M. (2179)

Scudder, S: Hubbard. Ocelli in butterflies. (Amer. nat., Aug. 1873, v. 7, p. 490.)

The males of *lerema*, accius and *l. pattenii* have a single ocellus in the middle of the front. [See Rec., 8.] [See Rec., 8.] G: D. (2180)

Scudder, S: Hubbard. Problems in entomology. (Can. entom., Sept. 1880, v. 12, p. 161-167.)

P. 101-107.)

Retiring President's address, delivered 24 Aug. 1880, before the Entomological club of the A. A. A. S. Brief historical notice of the study of entomology about Boston, Mass.; appeal to entomologists to study the comparative anatomy, embryology, post-embryological development, habits, structure of wings and structure of mouth-parts of insects.

G: D. (2181)

Shell-lac cultivation in India. (Colonies and India, 28 Aug. 1880, p. 11, 13 cm.)

Mode of preparing shell-lac and of transferring the lac-insect [$coccus\ lacca$] from one tree to another.

G: D. (2182)

Shimer, H: Butterflies in midwinter. (Science news, 1 Mar. 1879, v. 1, p. 143.)

Colias philodice? and vanessa antiopa? on the wing? 20 Dec. 1877, at Mt. Carroll, Ill. S: H. (2183)

Shortt, J: An account of the sclerotium stipitatum B. & Curr., of Southern India. (Journ., Linn. soc., Bot., 1 Nov. 1866, v. 9,

Considers the nature, distribution and uses of the W: T. (2184) fungus of white ant hills.

Siewers, C: Godfrey. Mold as an insect destroyer. (Amer. nat., Nov. 1879, v. 13, p. 681-683.)

Separate, [Phil., 1879]. p. 681-683, 23 ×15, t 18×10.2. Effect of fungi in destroying insects

B: P. M. (2185)

Smith, Miss Emily Adella. Shade trees, indigenous shrubs and vines, by J. T. Stewart, M.D., and Insects that infest them, by Miss Emily A. Smith. Peoria, Ill., 1877. t.-p. cover, 55 p., il. 22×14, t 17×9.7.

The entomological part (p. 29-55) describes, in a popular way, psylla celtides-mamma, pemphigus ulmicola, criosoma ulmi, vanessa antiopa, tremex columba, datana ministra, stenocorus putator, lecanium acericola, ornix acerifoliella, acgeria acerni, clisiocampa americana, pemphigus vagabundus, acronycla populi, clytus robiniae, xyteutus robiniae, hyphantria textor, clisiocampa sylvatica, attacus promethea, hylurgus terebrans, and curculio fales, some of which are figured.

G: D. (2185) G: D.

Smith, Mrs. Erminnie A. Concerning amber. (Amer. nat., March 1880, v. 14, p.

Alludes to insects in amber, and quotes verses upon that subject.

Sograff, N. Vorläufige Mittheilungen . . . [Rec., 1698].

Notice, by Alex. Brands. 2. p. 138.) zeiger, 22 March 1880, jahrg. 3. p. 138.) G: D. (2188)

Sources and preparation of shellac. (New remedies, June 1880, v. 9, p. 177, 27 cm.)

Propagation of coccus lacca and preparation of shellac and lac dye. From Valentine Ball's "Jungle life in India," G: D. (2189)

Strecker, Herman. Butterflies and moths in their connection with agriculture and horticulture. A paper prepared for the Pennsylvania fruit growers' society, January, 1879. Harrisburg, 1879. 22 p., 24×16.

Entitled, on p. 3, "Butterflies and moths of North America, in their relation to horticulture and floriculture." Universality of the attacks of lepidoptera upon plants; food-plants of numerous species; insectivorous plants; useful insects; peculiar caterpillars; mimicry; monstrosities; geographical distribution; American entomologists.

B: P. M. (2190)

Strecker, Herman. Wintering of butterflies. (Science news, 1 Mar. 1879, v. 1, p. 160.)

Vanessa antiopa and v. progne hibernate; philam-pelus labruscae captured, 8 Jan. 1874, at Fairbury, Ill. S: H. (2191)

Swinton, A. H. Notes on certain fossil orthoptera claiming affinity with the genus gryllacris. (Geol. mag., 1874, s. 2, v. 1, p. 337-341, pl. 1.)

Figures and describes gryllacris (recent species), .ungeri (restored) and corydalis brogniartii (Auouin). J. M. W. (2192) douin).

Taschenberg, E. L. Wandtafel zur Darstellung des Colorado-Kartoffelkäfers und seiner Entwickelungsstufen. Mit erklärendem Texte für Schule und Haus. Stuttgart, E. Ulmer, [1877]. 1 pl., 56×71, folded in a cover 30×25, and accompanied by Der Colorado-Kartoffelkäfer. Erläutern-

der Text zu der "Wandtafel zur Darstellung [etc]." Stuttgart, E. Ulmer, 1877. 12 p., 21 × 14.5, t 17 × 10.5.

Colored figures with description of egg, larva, pupa and image of doryphora decemlineata. G: D. (2193)

Tepper, F: Cerura multiscripta Riley.
(Bull. Brooklyn entom. soc., May 1878 [v. 1], p. 4.)

Larvae found on "upright willow" [salix sp?] 30 lv. F. G: S. (2194)

Tepper, F: Notes on notodonta tremula, Clerk, n. dictaeoides Esp. and n. rimosa Pack. (Bull. Brooklyn entom. soc., May 1879, v. 2, p. 3-4.)

With woodcuts of the larvae of the two first-named ecies. F. G. S. (2195) species.

Todd, James E. Contrivances for cross-fertilization in the ranunculaceae. nat., Sept. 1880, v. 14, p. 668-669.) Chiefly botanical. G: D. (2196)

Travers, H: H. Notes on the Chatham Islands. (Journ. Linn. soc., Bot., 3 Nov. 1864, v. 9, p. 135-144.)

Records, p. 144, the insects he recognized; also the fact that since the importation of bees European fruit trees have produced freely.

W: T. (2197)

Treat, Mary. Chapter in the history of ants. (Harper's new mo. mag., Jan. 1879, v. 58, p. 176-184.)

Reprint. (TREAT, Mary. Chapters on ants. N. Y., 1879. p. 11-72.)

Habits of formica sanguinea, the slave making ant; of its slaves, f. fusca and f. schaufussii; and of insects captured by it for food, lasius flavus, camponotus meleus and aphaenogaster treati.

B: P. M. (2198) and aphaenogaster treati.

Treat, Mary. Chapters on ants. Harper and Bros.. 1879. (Harper's half-hour ser., no. 123.) t.-p. cover, p. 5-96, 12 × 8, t 9×5.7. il. pap., 20 cts.

Rev. (Amer. bookseller, 1 Sept. 1879, v.

8, p. 174, 3 cm.)

Chap. 1 (p. 11-72) is a reprint of the author's "Chapter in the nistory of ants" (Harper's new mo, mag., Jan. 1879, v. 58, p. 176-184) [Rec., 2198]; chap. 2 (p. 72-96) is a reprint of the author's "The harvesting ants of Florida" (Lippincott's mag., Nov. 1878, no. 131, v. 22, p. 555-562) [Rec., 2200].

B: P. M. (2199)

Treat, Mary. The harvesting ants of Florida. (Lippincott's mag., Nov. 1878, no. 131, v. 22, p. 555-562.)

Reprint. (TREAT, Mary. Chapters on ants. N. Y., 1879. p. 72-96.)

Habits of pogonomyrmex crudclis; its harvesting of seeds, its recognition of comrades; theories as to soldiers and queens with smooth mandibles. G: D. (2200)

Treat, Mary. Is the valve of utricularia sensitive? (Harper's new m. mag., Feb. 1876, no. 309, v. 52, p. 382-387. il.)

"Shows how the mosquito [culex] and chironomus larvae are caught in the utricles, which proves Mr. Darwin in error with regard to the sensitiveness of the valve of utricularia."—Author.

B: P. M. (2201)

Trelease, W: The fertilization of aquilegia vulgaris. (Amer. nat., Oct. 1880, v. 14, p. 731-733.)

How bombus fertilizes a. vulgaris. G: D. (2202)

Turner, H: Ward. The belostoma piscivor-[o]us. (Amer. nat., Sep. 1879, v. 13, p. 585.)

A belostoma seen killing a stickle-back [gasteros-cs], G: D. (2203) teus].

[United States entomological commis-(Amer. nat., Oct. 1880, v. 14, p. sion. 753-755.)

153 (75)*. Organization, distribution of the work, and results of investigations of the commission in regard to caloptenus spretus.

G: D. (2204)

[United States entomological commission, Work of the.] (Amer. nat., Jan. 1879.

v. 13. p. 60-61.) Extract from the Report of the U. S. Secretary of the interior, for 1878. G: D. (2205) United States — Entomological commission* Bulletin no. 3. The cotton worm [aletia argillacea]. Summary of its natural history, with an account of its enemies, and the hest means of controlling it; being a report of progress of the work of the commis-sion.... By Chas. V. Riley, Wash., Jan. 28, 188). t.-p. cover+6+[1]+144p., 1 col. pl., 23×15, 84 fig.

Rev. (Nature, 18 Mar. 1880, v. 21, p. 446.) Rev., entitled, "Riley on the cotton worm." (Amer. nat., April 1880, v. 14, p.

283-284.)

Notice. (College quart., May 1880, v. 3,

no. 1, p. 14, col. 2.)

History of prior investigations; destructiveness, nomenclature, descriptions and figures of all stages, seasons, migration, hibernation, natural enemies and parasites of alctia argillacea; influence of weather and environment upon its appearance and development; artificial means against it: prevention, mechanical destruction, poisoning of larvae, destruction of imagos. struction, poisoning of larvae, destruction of imagos. Appendix, containing answers to Circular no. 7. Index. Describes larvae of plusia dyaus (p. 11), aspila virescens (p. 25), platyhypena scabra (p. 27); describes also trichogramma pretiosa (p. 30), tachina aletiae (p. 40-41), sarcophaga sarraceniae (larva and puparium, p. 41; imago in part, p. 30-49), belvoisia bifasciata (larva, p. 42), cirrospilus escurs (p. 41), chalics ovata (larva and pupa, p. 43), didictyum n.g. [proctotrupidae], d. zigzag n. sp. (p. 44), pimpla conquisitor (larva and pupa, p. 45), cryptus nuncius; figures of many of these and other insects.

B: P. M. (2206)

United States - Entomological commission. Bulletin no. 4. The hessian fly [cecidomyia destructor]. its ravages, habits. enemies, and means of preventing its increase. By A. S. Packard, jr., M. D. Wash., May 20, 1880. t.-p. cover, 43 p., 2 pl., each pl. with 1 p. explanation, t 19×11.2; 1 map, t 20.5×26.7: 23×15.

Rev. and extract, entitled "The hessian fly." (Amer. nat., Aug. 1835, v. 14, p.

586-587.)

Statement of the present knowledge upon the subjects indicated by the title, intended to elicit further information. Describes and figures the fly in all its stages, treats of the times and places of its occurrence in injurious abundance, and contains a list of the most important published writings relating to the fly.

United States — Entemological commission. Bulletin no. 5. The chinch-bug [blissus leucopterus]. Its history characters, and habits, and the means of destroying it or counteracting its injuries. By Cyrus Thomas. Wash., 1879. t.-p. cover + 44 p., 23 × 15, t 19×11.2; map. 23×31; 10 fig. Notice. (College quart. [Ames, Iowa],

May 1880, v. 3. no. 1, p. 14, col. 2.)
Rev., entitled "Thomas's Chinch bug." (Amer. nat., July 1880, v. 14, p. 511.)

Distribution and ravages, civil history, names and description, number of broods, hibernation, migrations, and natural enemies of blissus lewopterus; artificial means against it; early sowing, brurierding, burning, starving, crushing, and other means. B: P. M. (2208)

United States — Geological and geographical survey of the territories. Bulletin, 1874 and 1875. Vol. 1. Wash., 1875. t.-p. covers+13+28+77+499 p., pl. 1-3, 7. 8, 11-26, 23×15, t.18.8×11.1; pl. [4], 23×31; pl. [5], 23×57; pl. [6] 23×88; pl. 9, 23× S1; pl. 10. 23×So; map, 61×77.

The pages, dates, and entomological contents are as

follows :-

follows:— [s. 1], no. 1. 1874. half t.•p.+28 p. — List of members and collaborators of the survey for 1873 [Rec. 564 a], p. 3·4.—List of the publications of the Geological survey of the territories [Rec., 564 b], p. 5·5. [s. 1], no. 2, 1874. half t.•p.+77 p.—Thomas, C. Descriptions of some new orthoptera . . . [Rec., 565],

p. 63-71.

p. 63.7i.
s. 2, no. 1, 1875. p. 1-48, pl. 1-3.
s. 2, no. 2, 14 May 1875. p. 49.142.—INGERSOLL, E. Report on the natural history . . . [Rec., 566], p. 121-124, s. 2, no. 3, 15 May 1875. p. 143-214, pl. [4-0], 7-8.
s. 2, no. 4, 10 June 1875. p. 215-232, pl. 9-18.—SCUDDER, S: H. The tertiary physopoda of Colorado [Rec., 567], p. 221-223, s. 2, no. 5, S Jun. 1876. [1 p.]+p. 233-414, pl. 19-21.—UHLER, P. R. List of hemiptera of the region west of the Mississippi River . . . [Rec., 568], p. 267-361, pl. 10-21.

s. 2, no. 6.8 Feb. 1876. p. 415-499+13 p., pl. 22-26.— SCUDDER, S: H. Fossil orthoptera from the Rocky Mountain tertiaries [Rec., 569], p. 447-449. B: P. M. (2209)

United States-Geological and geographical survey of the territories. Bulletin, 1876. Vol. 2. Wash., 1876. t.-p. covers+12+392 p., pl. 1-31, 42-49, 1-6 [42-47]. 23×15, t 18.8×11.1; pl. 1-6 [32-37], 8-10 [39-41], 23×52; pl. 7 [38]. 23×61; maps, 44×71. 55×72.

The pages, dates, and entomological contents are as

follows:

United States- Geological and geographical survey of the territories. Bulletin. 1877. Vol. 3. Wash., 1877. t.-p. covers+ 8+856+p., pl. 2-25, 27-34, 36, 23 × 15, t 18.8 × 11.1; pl. 1, 41×38; pl. 26, 35 × 46; pl. 35, 23×30; pl. 37, 23×24; pl. 38, 23×62; pl. 39, 33×52.

The pages, dates, and entomological contents are as

iollows:—
no. 1. 5 Apr. 1877. p. 1-185, pl. 1-25.—Grote, A. R. Notes on a collection of noctuid moths made in Colorado . . . [Rec., 850], p. 115-125.—Chambers, V. T. The tineina of Colorado [Rec., 851], p. 121-142.—Chambers, V. T. Notes on a collection of tineid moths made in Colorado . . . [Rec., 852], p. 143-145.—Chambers, V. T. On the distribution of tineina in Colorado [Rec., 853], p. 147-150.—Packard, A. S., jr. On a new cave fauna in Utah [Rec., 854], p. 157-169.

no. 2. 30 Apr. 1877. p. 187-530, pl. 27-28.—OSTEN SACKEN, Č: R. Western diptera . . . [Rec., 855], p. 189-354.—UILLER, P. R. Report upon the insects collected by P. R. Uhler during the explorations of 1875. . . . [Rec., \$56],p. 355-475, pl. 27-28 [concl., no. 4,p. 765-801].— THORRELL, T. Descriptions of the araneae collected in Colorado . . [Rec., \$57], p. 477-528.— EMERTON, J. H: Descriptions of two new spiders from Colorado [Rec.,

Descriptions of two new spitters (16).

\$58], p. \$28-\$29.

no. 3. 15 May 1877. p. \$31-738, pl. 29-39.

no. 4. 15 Aug. 1877. p. \$739-855+8+p.— SCUDDER, S:

H. The first discovered traces of fossil insects in the
American tertiaries [Rec., \$50], p. 741-752.— SCUDDER,

S: H. Description of two species of carabidae found in
the interglacial deposits of Scarboro' Heights, near Toronto, Canada [Rec., \$60], p. 763-764.—UILLER, P. R.

Report [ctc.] [see no. 2, p. 355-475; Rec. \$56], p. 765-801.

B: P. M. (2211)

Vayssière, Alb. Sur la métamorphose du Note . . . (Compt. rend., prosopistoma. 7 June 1880. v. 90. no. 23, p. 1370-1371.)

Records the transformation of prosopistoma puncti-frons into images resembling caenis, proving that pro-sopistoma is an ephemerid nymph. B: P. M. (2212)

Viallanes, H. Sur l'appareil respiratoire et circulatoire de quelques larves de diptères. (Comptes rendus de l'Acad. des sci., 17 May 1880, v. 90, p. 1180-1182.)

In the young larvae of ctenophora, the dorsal vessel In the young larvae of *ctenophora*, the dorsal vessel is a long, contractile tube open only at its two extremities. It consists of a homogeneous substance containing nuclei themselves contractile, and its anterior portion floats freely in the bloody fluid; the posterior portion, on the contrary, is clothed with a layer of continually budding cells which become attached by prototinually budding cells which become attached by protoplasmic prolongations to the walls of the body and form the primitive pericardaac sinus; the place where the lateral orifices of the dorsal vessel are going to be formed is indicated by a region of more energetic contractions. The last segment is entirely filled with tracheal tufts which interlace behind so as to form a sort of sieve behind the orifice of the dorsal vessel. Hence the blood is entirely oxidized as it passes through the last segment, and before the appearance of the lateral orifices the heart is entirely arterial.

"To recapitulate, I have shown 1º that the heart of insects is, at first, a simple tube, open only at its two extremities; 2º that, so long as there are no lateral orifices, the heart is entirely arterial; 3º I have indicated the mode of formation of the lateral orifices and of the pericardial sinus."

G: D. (2213)

Vorce, C. M. Destructive powers of certain insects. (Amer. nat., Oct. 1879, v. 13,

Mentions paper read by above author on this subject hefore the American society of microscopists in Buffalo.

R. Th. (2214)

Walsingham, Lord, see DE GREY, T:, Lord Walsing-

Weale. J. P. Mansel. Notes on the structure and fertilization of the genus bonatea, with a special description of a species found at Bedford, South Africa. (Journ. Linn. soc., Bot., 7 Mar. 1867, v. 10, p. 470-476.)

Describes the curious way in which lepidoptera

W: T. (2215) transfer pollen.